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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/065,089	09/16/2002	Warren G. Hall	012438.04	4152

24239 7590 08/11/2004

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EXAMINER	
LEE, HWA C	

ART UNIT	PAPER NUMBER
2672	5

DATE MAILED: 08/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/065,089	HALL ET AL.	
	Examiner	Art Unit	
	Hwa C Lee	2672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 May 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-36* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-36* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *16 September 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This office action is in response to the amendment filed 05/18/2004, with Warren G. Hall and William L. Young as the Inventors.

2. The application is entitled: "METHOD AND SYSTEM FOR REMOTELY PROVIDING USER DEFINED CUTTING FILES FOR CNC ROBOTIC TOOLS".

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fishman, U.S. Patent No., 6,112,133 in view of Bigelow, U.S. Patent No. 2004/0138775.

6. In regards to claim 1, Fishman discloses the following limitation.

A method for providing a cutting file for a computer numerical control robotic tool to a customer, the method comprising the steps of:

- Fishman explicitly teaches a system and method for generating CNC program for machining parts with planar and curvilinear surface and surfaces of revolution (Col. 4, line 39 – Col. 5, line 18). Said CNC program machining parts comprises instructions for a CNC tool to machine the parts, which specifically is a cutting file.
- An interface module (32) provides a GUI (FIG. 6) for obtaining part information from the user to create the desired CNC program (Col. 5, lines 19 – Col. 7, line 49 and FIG. 6).

7. Fishman teaches providing a GUI to the customer for entering and pertinent information in creating the CNC program (FIGS. 6-12 and Col. 4, line 39 – Col. 8, line 51), but does not explicitly teach creating the CNC program over the Internet from a remote location.

8. Bigelow teaches the said limitations.

(a) providing at a site remote from the customer a generic model for a particular product to be made by the customer;

- Bigelow teaches a design system, wherein the customer may connect to a server over the Internet for ordering product designs using a CAD system. A default web page is provided to the customer, wherein the customer can change or specify different product configuration by using the product configuration form (¶

[0026] –[0032] and FIG. 2, No. 202). Said default web page explicitly provides a default model for a particular product, which specifically is a generic model. In addition, Bigelow explicitly teaches that the CAD system can generate CAD objects, object assemblies or other deliverables that are generally known to those skilled in the art. The generated CAD product can be displayed, saved to a file, or used by a CNC machine to create the assembly. Thus, the user can take the CAD product and use to create the desired product. It would be obvious to modify Fishman to add the method of generating the CNC program (cutting file) over the internet in order to gain the advantage as will be described below in the motivation statement.

(b) displaying to the customer a representational image of the product corresponding to the particular product and default design parameters for the image;

- As applied above, Bigelow teaches providing to the customer a generic model for the particular product, which is displayed on a display screen to the customer (FIG. 2, No. 202). Bigelow also teaches allowing the customer to see the default properties of the CAD object and allowing the user to modify the default properties (¶ [0032] – [0036] and FIGS. 6-7). Said CAD object properties

displayed to the customer specifically are default design parameters.

(c) allowing the customer to modify at least one default design parameter and to select final design parameters for the model;

- As applied to part ***(b)*** above, Bigelow explicitly teaches allowing the customer to modify the default design parameter to set final design parameters. For example, the customer is allowed to select the type of the bolt head (¶ [0032] –[0036] and FIGS. 6-7).

(d) receiving data corresponding to the final design parameters at the site remote from the customer;

- The same basis and rationale for claim rejection as applied to parts ***(a)-(c)*** above are applied. Receiving user input regarding the final design parameters over the Internet is specifically receiving the said data at a remote site.

(e) generating at the remote site using the generic model for a particular product a cutting file that incorporates the final design parameters; and

- As applied to parts ***(a) – (d)*** above, Bigelow teaches modifying the default model to change the product properties using the configuration form allows the customer to create a CAD product that incorporates the details of the final product as selected by the user over the internet. Also as applied to part ***(a)*** above, said

creation of the CAD product over the Internet is applied to Fishman. The motivation statement will follow below.

9. Both Fishman and Bigelow teaches

(f) making the cutting file available to the customer.

- As applied to the preamble above, Fishman teaches creating the CNC program, which specifically is provided to the user (customer) for machining the desired products.
- As applied to parts ***(a)*** above, Bigelow teaches providing the CAD product to the customer as a drawing on the display device of the customer, which specifically is providing the cutting file available to the user.

10. It would have been obvious to one of ordinary skill in the art at the time of the invention to take the teachings of Fishman and to add from the Bigelow the method of generating a product design over the Internet. The Internet is well known in the art for accelerating the computing process by making it easy to obtain information. Bigelow explicitly teaches that the Internet has increased the demand for personalized product designs and increased the pressure to reduce product development time. Bigelow recognizes the bottleneck created by the standard CAD/CAM system employed by individual companies due to the complexity of the system. Thus, Bigelow provides a system for easily creating personalized designs using the Internet. Bigelow's design system uses simple web pages for entering design information, and the use of the Internet speeds delivery of the design. Further, it is well known that a CAD system is used to

create a CNC cutting file, and therefore Fishman and Bigelow are analogous arts.

11. In regards to claim 2, the same basis and rationale for claim rejection as applied to claim 1 are applied. Bigelow explicit teaches displaying the CAD product as a drawing as applied to claim 1 above (¶ [0031]), which specifically is displaying the representation of the final design.

12. In regards to claim 3, Fishman and Bigelow teach ***the method of providing a cutting file of claim 2***. In addition, Fishman and Bigelow teaches the following:

13. Fishman teaches

(c) allowing the customer to specify tool-related data.

- Fishman explicitly teaches allowing the customer to specify tool-related data (Col. 6, lines 35-57 and FIGS 5, 7-9). Said tool related data must be specified in order to create the CNC program (cutting file).

14. Fishman and Bigelow in combination teaches the following;

wherein the product comprises a plurality of components, and further comprising the steps of:

- Fishman explicitly teaches a plurality of components (Col. 8, lines 1-52 and FIGS. 6-9). Fishman is not limited to a single component product.
- Bigelow explicitly teaches a plurality of components (FIGS. 6-11).

(a) generating a representational image of at least one individual component of the product;

- Fishman explicitly teaches generating at least one individual component of the product as applied above (Col. 8, lines 1-52 and FIGS. 6-9). In order to display an image, said image must be generated, and the image is generated in response to the user input. In addition, displaying a plurality of components specifically is generating at least one individual component.
- Bigelow explicitly teaches (FIGS. 6-13) displaying images of at least one individual component of the product. Displaying the images specifically is generating the images since the images must be generated in order to display the images.

(b) displaying the at least one individual component image; and

- Fishman teaches displaying at least one individual component image as applied to part ***(a)*** above.
- Bigelow teaches displaying at least one individual component image as applied to part ***(a)*** above.

15. It would have been obvious to one of ordinary skill in the art at the time of the invention to take the teachings of Fishman and modify it add the teachings of Bigelow as applied to claim 1 above. Displaying the image of the default model and final model specifically reads on the limitation of displaying the individual components.

16. In regards to claim 4, Fishman and Bigelow teach ***the method for providing a cutting file of claim 1***. In addition, Fishman and Bigelow both teach ***wherein the step of making the cutting file available to the customer comprises transmitting the cutting file to the customer from a memory system.***

- Fishman teaches said limitations of storing the machine specific configuration file (FIG. 5, No. 40 and Col. 7, line 5 – Col. 8, line 52).
- Bigelow teaches said limitation of storing the CAD product as a file as applied to claim 1 above (¶ [0031]).

17. Claims 5-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fishman in view of Bigelow as applied to claims 1-4 above, and further in view of Burrows et al., U.S. Patent No., 6,397,117.

18. In regards to claim 5, Fishman and Bigelow teach the limitations of storing the cutting file for providing it to the customer as a drawing on the customers display and as a stored file as applied to claim 4 above, but Fishman and Bigelow does not explicitly teach allowing the customer to access the stored cutting file over the communication network.

- Burrows et al. teaches a CAD system operating over a communication network, wherein the user gains access to a server comprising a CAD tool for creating the desired CAD design. The Resultant design is provided to the user as a file (Col. 4, line 19 – Col. 6, line 31 and FIGS. 3-6).

19. It would have been obvious to one of ordinary skill in the art at the time of the invention to take the teachings of Fishman and Bigelow, and to add from Burrows et al. the method of allowing the customer to access the cutting file over the communication network in order to provide to the customer the flexibility to create and save the cutting file. The customer can log onto the network to create the desired cutting file by designating the design parameters from a remote location, and thus the process is not location dependent. Once the final cutting file is configured, the customer can select to purchase the file or to save the file for editing or purchasing the file at a later time. In addition, all references are directed to creating custom cutting file, whereby the customer can input the necessary design parameters, and Bigelow and Burrows allows said input of design parameters to be performed from a remote location by logging onto the network over the Internet or intranet.

20. In regards to claim 6, the same basis and rationale for claim rejection as applied to claims 1 and 5 are applied. The Internet or intranet is a public communication network.

21. In regards to claim 7, Burrows et al. teaches the following limitation.

The method of providing a cutting file of claim 1, further comprising the step of executing a financial transaction in which the customer purchases the cutting file in advance of making the cutting file available to the customer.

- The billing task can be performed separately form the returning of data to the user (Col. 6, lines 1-4).

22. It would have been obvious to one of ordinary skill in the art at the time of the invention to take the teachings of Fishman and Bigelow, and to add from Burrows et al. the method of asking for the payment from the user in a separate transaction to providing the cutting file to the user. It is a standard practice in the art of Internet commerce to ask for payment before providing the product. This is the only way to insure that the user will pay for the product.

23. In regards to claim 8, the same basis and rationale for claim rejection as applied to claim 7 are applied. The financial transaction system disclosed by Burrows et al. uses public communications network.

24. In regards to claims 9 and 10, the same basis and rationale for claim rejection as applied to claims 1-8 above are applied. The computer system used to process the method of generating the cutting file as taught by Fishman, Bigelow and Burrows et al. specifically are an apparatus for providing a cutting file. Claims 9 and 10 are directed to the same limitations as the combinations of claims 1-9 above.

25. In regards to claim 11, the same basis and rationale for claim rejection as applied to claims 2 and 10. Bigelow explicitly teaches displaying to the customer the final representational image (¶ [0031]).

26. In regards to claim 12, the same basis and rationale for claim rejection as applied to claims 3 and 11 are applied since claim 12 is directed to the same limitations as claims 3 and 11 above.

27. In regards to claims 13-15, the same basis and rationale for claim rejection as applied to clams 4-6 and 9-10 are applied.

28. In regards to claims 16 and 17, the same basis and rationale for claim rejection as applied to clams 7-10 are applied.

29. In regards to claim 18, the same basis and rationale for claim rejection as applied to claims 1-10 above are applied. The computer program stored in memory is used to process the method of creating the cutting file.

30. In regards to claim 19, the same basis and rationale for claim rejection as applied to claims 2, 11, and 18 above are applied.

31. In regards to claim 20, the same basis and rationale for claim rejection as applied to claims 3, 12, and 18 above are applied.

32. In regards to claims 21-23, the same basis and rationale for claim rejection as applied to claims 13-15 and 18 above are applied.

33. In regards to claims 24-25, the same basis and rationale for claim rejection as applied to claims 16-17 and 18 above are applied.

34. In regards to claim 26, the same basis and rationale for claim rejection as applied to claims 1, 12 and 18 are applied. Fishman teaches a tools database (30) and material database (70). In addition, Bigelow explicitly teaches a database of product configuration information (FIG. 1 and 18 and (¶ [0031]).

35. In regards to claim 27, the same basis and rationale for claim rejection as applied to claims 4-5 and 26 are applied. All three references teach a computer system, which specifically operates computer programs stored on computer

readable media. Fishman teaches a plurality of memory elements, which specifically are a plurality of media. In addition, both Bigelow and Burrows et al. teach a network system, which specifically is a plurality of computers interconnected by a network.

36. In regards to claim 28, the same basis and rationale for claim rejection as applied to claims 18 and 26 above are applied. The computer program as applied to claims 4, 18 and 26 is specifically a computer readable memory system encoded with a data structure.

37. In regards to claim 29, the same basis and rationale for claim rejection as applied to claim 28 above are applied.

38. In regards to claim 30, the same basis and rationale for claim rejection as applied to claims 19 and 29 above are applied.

39. In regards to claim 31, the same basis and rationale for claim rejection as applied to claims 20 and 29 above are applied.

40. In regards to claims 32-34, the same basis and rationale for claim rejection as applied to claims 21-23 and 29 above are applied.

41. In regards to claim 35-36, the same basis and rationale for claim rejection as applied to claims 24-25 and 29 above are applied.

Response to Arguments

42. Applicant's arguments, see page 3, lines 18-20, filed 05/18/04, with respect to the rejection(s)of claim(s) 1-4 under 35 USC 102(e) have been fully considered and are persuasive. Therefore, the rejections have been withdrawn. Likewise, the rejections of claims 5-36 under 35 USC 103(a) have also been

withdrawn since the rejections ultimately depend on the prior art relied upon in claims 1-4. However, upon further consideration, a new ground(s) of rejection is made in view of Fishman, Bigelow and Burrows et al. as applied above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hwa C Lee whose telephone number is 703-305-8987. The examiner can normally be reached on M-F 8:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi can be reached on 703-305-4713. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hwa C Lee
Examiner
Art Unit 2672

JEFFERY BRIER
PRIMARY EXAMINER

HCL
07/28/04